

REMARKS

To the extent that the issues raised in the Office Action of November 12, 1996 require a response, they will be addressed below in the same numbered sequence as they appear in the Office Action.

1. Claims 1 to 23, 25 to 39, and 102 are pending in the application, after claims 24 and 40 to 101 have been canceled without prejudice by the present amendment and claim 102 has been newly added.
6. The paragraph "Cross-Reference to Related Cases" has been updated, so that it contains the serial number that was found missing by the Examiner as well as all status changes that have occurred in the related cases mentioned in this paragraph.

A replacement page 97 with a table less than five inches wide is attached.

7. Claims 1-40 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- 7.1 The term "selectively variable" has been replaced by "controlled".

In response to the Examiners question whether the respective magnitudes of the

torque being transmitted by the output element and by the clutch are different from each other, Applicants respectfully note that claim 1 (original as well as currently amended version) recites that the clutch works in parallel with a torque converter. If a part of the torque arriving from the output element is transmitted through the torque converter, it follows that the clutch does not transmit the same amount of torque as the output element.

7.2. The phrase “amount of torque to be transmitted by the clutch as a function of the RPM” in claim 2 contained an error. Consistent with the equation cited in claim 2, this was corrected so that the amended claim 2 says “as a function of the torque M_{pm} ”. The correction is supported by the equation and introduces no new matter. The phrase “which is at least substantially constant within the entire operating range of the power train” has been removed from claim 2 and put into the new dependent claim 102. This removes the contradiction where the dividing factor was described as “substantially constant” in the original claim 2, but subsequently defined as “a function” of other variables in claims 3-6.

7.3 Claim 6 has been amended to depend on claim 2.

7.4. Claim 9 has been rephrased to express the intended meaning more clearly.

7.5. In claim 14, the word “can” has been replaced by “cannot”, and “non-analytical” has been replaced by “analytical” to correct a translation error. The original German claim 14 says “nicht eindeutig analytisch beschreibbar”, which means “not unequivocally describable in analytical terms”. No new matter is thereby introduced in the application.

- 7.6 The analogous correction as in claim 14 was also made in claim 15. The phrase "I return flow of fluid from one of the compartments into the other of the compartments" was based the translator's misunderstanding of the German term "I-Rückführung". The intended meaning is "I-feedback" (short for integrating feedback, a term used in control technology). This has been appropriately corrected.
- 7.7 Amendments to claim 21 are analogous to those of claim 2.
- 7.8 Claim 22 has been rephrased to express the intended meaning more clearly.
- 7.9. Claim 23 has been rephrased to eliminate the problem of lacking antecedents.
- 7.10 Claim 24 has been canceled without prejudice.
- 7.11 Claim 25 has been rephrased to eliminate the problems found by the Examiner and to express the intended meaning more clearly.
- 7.12 Amendments to claims 26 to 29 are analogous to those of claim 25.
- 7.13 Recitation of a step "determining the RPM of said output element" was added to claim 29. As support for this change, Applicants respectfully submit that the way in which the term "RPM" is referred to farther below in the same claim implies that a determination of the RPM takes place within the method of claim 29.
- Thus, the additional recitation adds no new matter.
- 7.14 Claim 33 has been rephrased to express the intended meaning more clearly.
- 7.15 Claim 34 has been rephrased to express the intended meaning more clearly.
- 7.16 Claim 35 has been rephrased to remove the indefinite expressions and the functional claiming "which ensures insulation".
- 7.17 Amendments to claim 36 are analogous to those of claim 35.

- 7.18 Claim 37 has been amended to express the intended meaning more clearly.
- 7.19 In the amended claim 38, the step of “detecting an impending acceleration ...” which was previously recited in an implied form (“response to detected indication of intended acceleration”) is now positively recited. The indefinite language (“such as...”) has been removed.
- 7.20. Claim 40 has been canceled without prejudice.
- 7.21 Applicants have carefully reviewed all claims for proper antecedent basis of
- &7.22 every term and made corrections as appropriate.
8. Claims 1-40 stand rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The rejection is based on the Examiner’s finding of insufficient disclosure regarding selection or determination of the factors k_{corr} , $M_{\text{corr pm}}$ and $M_{\text{corr wu}}$.

Applicants respectfully submit that the process of determining these quantities is covered in detail in the specification and drawings, for example in Figure 28 and the part of the description that refers to Figure 28, starting on page 114, line 18 of the specification.


Applicants further submit that U.S. Patent 5,674,155, “Method of and Apparatus for Transmitting Torque in the Power Trains of Motor Vehicles” by Otto et al.

contains claims that are very similar to the claims of the present application, in particular with regard to the aforementioned correction factors . See for example claim 2 of the '155 patent, where the factors k_{corr} , $M_{corr\ pm}$ and $M_{corr\ wu}$ are used in the same equation as in claim 2 of the present application and are supported in the description of the patent in substantially the same manner as in the present case. Therefore, Applicants respectfully submit that the close analogies between U.S. Patent 5,674,155 with regard to factors k_{corr} , $M_{corr\ pm}$ and $M_{corr\ wu}$ represent an additional reason why the rejection under 35 U.S.C. 112, first paragraph should be withdrawn.

9. The Examiner found it impossible to interpret the scope of the claims in light of the 35 U.S.C. 112 issues. Applicants respectfully submit that all of the issues in the Office Action of November 12, 1996 have been appropriately addressed in the present Amendment and Remarks and that the application is therefore in condition to be examined on the merits.

Respectfully submitted,

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Attachments:

Replacement page 97 of the specification
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operating points 1, 2 and 3. The efficiencies and slips which can be achieved with apparatus employing "hard" and "soft" torque converters at the operating points 1, 2 and 3 shown in FIG. 18 are listed in the following table:

	"hard" converter		"soft" converter	
	Slip s (%)	Efficiency η	Slip s (%)	Efficiency η
Point 1	65	0.547	75	0.388
Point 2	40	0.789	60	0.669
Point 3	2	0.980	2	0.980

The table shows that, when the apparatus employs a "soft" converter, the efficiency is less than in the case of a "hard" converter during operation within the median RPM range. However, the slip is much more pronounced, i.e., the transmission of torque is much more satisfactory. On the other hand, the slip and the efficiency at the operating point 3 of FIG. 18 are the same regardless of whether the apparatus employs a "soft" or a "hard" converter.

Due to the dynamic behavior of mechanical systems as well as hydraulic systems, an overly rapid increase of the value of a parameter which influences the division of torque being transmitted by the torque transmitting apparatus into that transmitted by the converter and that